



# Carbon cycle: releasing dinosaur breath in the lab



### THE CARBON CYCLE

**KEY:** Carbon cycle product (blue box), carbon cycle process (yellow box)

The diagram illustrates the carbon cycle with the following components and processes:

- Atmosphere:** Carbon dioxide in atmosphere
- Land:** Carbon in green plants, Carbon in land animals, Carbon in soil
- Sea:** Carbon dissolved in sea water, Carbon in marine animals & plants, Carbon in soil parts, Calcium carbonate in hard parts
- Geosphere:** Carbon in coal and natural gas, Carbon in oil, Carbon in limestone

**Processes:**

- Photosynthesis:** Carbon dioxide in atmosphere to Carbon in green plants
- Respiration:** Carbon in green plants to Carbon dioxide in atmosphere
- Consumption:** Carbon in green plants to Carbon in land animals
- Excretion and death:** Carbon in land animals to Carbon in soil
- Weathering:** Carbon dioxide in atmosphere to Carbon dissolved in sea water
- Dissolved in runoff - carried to sea:** Carbon dioxide in atmosphere to Carbon dissolved in sea water
- Absorption by organisms:** Carbon dissolved in sea water to Carbon in marine animals & plants
- Death:** Carbon in marine animals & plants to Carbon in soil parts
- Excretion and death:** Carbon in marine animals & plants to Calcium carbonate in hard parts
- Combustion:** Carbon in coal and natural gas, Carbon in oil to Carbon dioxide in atmosphere
- Weathering:** Carbon in coal and natural gas, Carbon in oil to Carbon dioxide in atmosphere
- Death:** Carbon in coal and natural gas, Carbon in oil to Carbon in soil
- Excretion and death:** Carbon in coal and natural gas, Carbon in oil to Carbon in soil
- Death:** Carbon in coal and natural gas, Carbon in oil to Carbon in limestone
- Excretion and death:** Carbon in coal and natural gas, Carbon in oil to Carbon in limestone

This JESEI activity aims to teach students about the nature of carbon, the different compounds it exists in, the reactions it takes part in and how the processes that carbon and carbon compounds are involved in are linked together to form the carbon cycle.

Activity details available at:  
<https://geohubliverpool.org.uk/jesei/carbon%20cycle%203.htm>